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# Dairy Production

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UNITED STATES DEPARTMENT OF AGRICULTURE

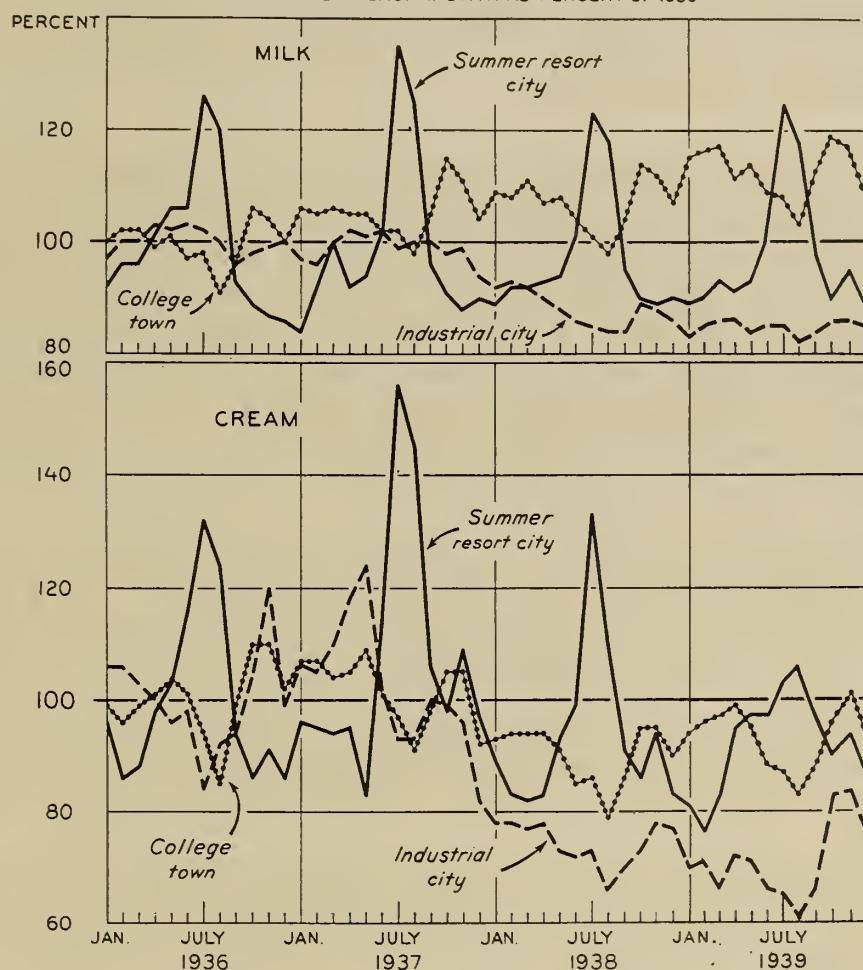
No. 9

A.M.S.

JANUARY 15, 1941

## SALES OF MILK AND CREAM IN THREE WISCONSIN CITIES

DAILY AVERAGE IN EACH MONTH AS PERCENT OF 1936



U. S. DEPARTMENT OF AGRICULTURE

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Many of the irregular changes in the quantities of milk and cream sold for fluid consumption in individual cities are due to population movements. In Madison, Wisconsin, consumption increases when the University opens. In Shawano tourists increase consumption in the summer. In Janesville consumption shows little seasonal variation but appears to be much affected by changes in local industrial employment, which probably also causes some population movements. In all three cities the recession that began late in 1937 affected the consumption of cream more than of milk.

These records which are being compiled under the supervision of Mr. Elmo Eke, Milk Control Division, Wisconsin Department of Agriculture, are an example of the excellent new statistics on milk and cream consumption which are becoming available in some of the areas where milk control laws are in effect.

## DAIRY PRODUCTION SUMMARY

Milk production, favored by mild weather, increased somewhat more than usual during December and by the end of the month it was nearly 5 percent heavier than a year earlier, the Agricultural Marketing Service reports. During the last week of the month temperatures through the main Dairy Belt from Minnesota and Iowa eastward were as high as is normal for March. The rate of feeding was high on December 1, but increased less than usual, and by the end of the month feeding was no heavier than a year ago. However, with average weather, milk production is expected to average a little higher than a year ago through the remainder of the current feeding period.

Milk production on farms during December is estimated at 8.05 billion pounds or 3 percent higher than in the same month of 1939. Daily production per capita in December was higher than in previous Decembers in any of the past half dozen years but somewhat lower than in December during the 1931-33 period of heavy winter production.

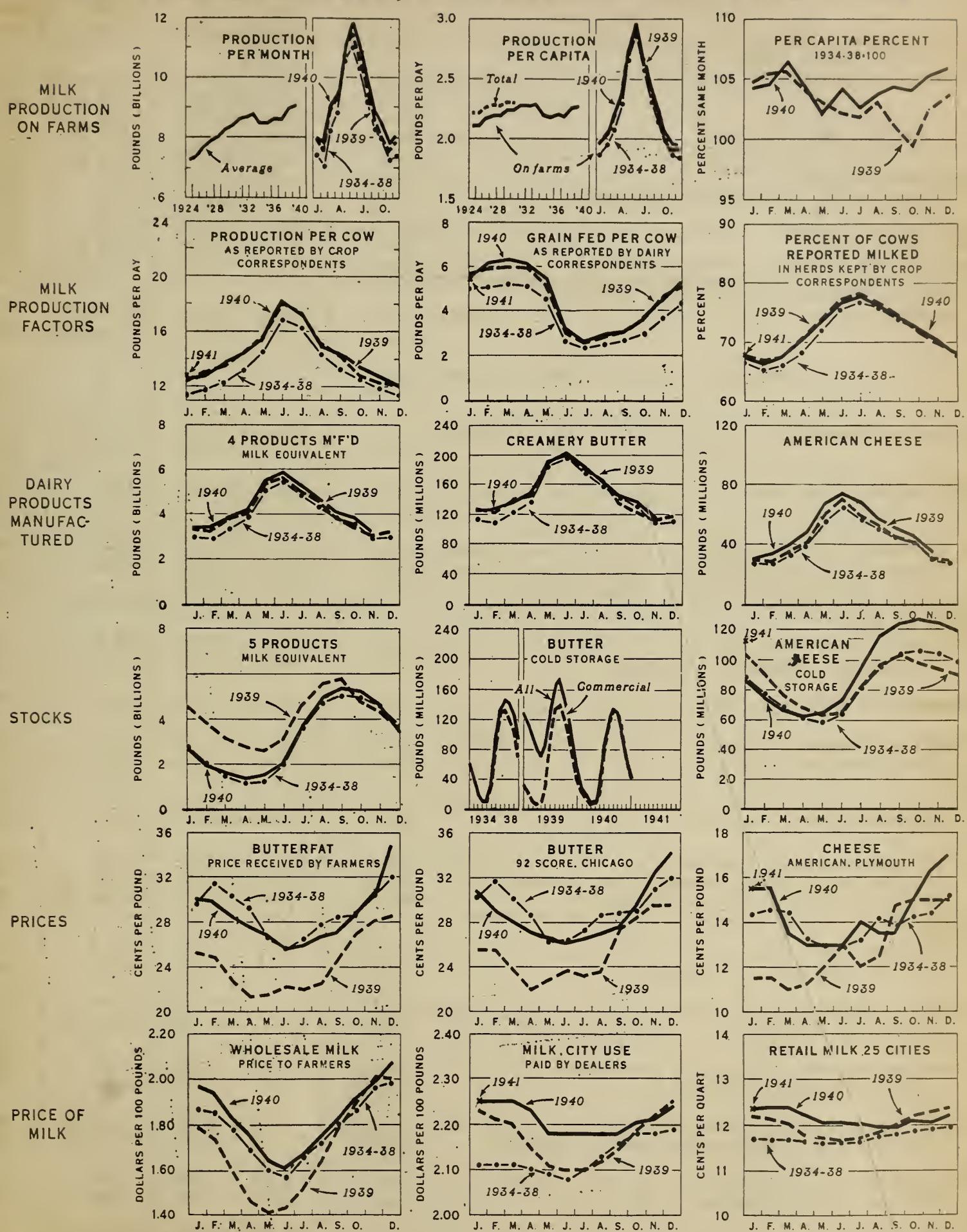
Production of the principal dairy products during December appears to have been more than 7 percent higher than in December 1939 and 6 percent above the previous top for the month, with butter, cheese and evaporated milk all expected to show new high records for that season of the year. Creamery butter production was about 6 percent higher than a year earlier and cheese nearly 10 percent higher. Production apparently continued heavy well into January even though the period of abnormally warm weather ended early in the month. Butter production in the week ending January 9 was nearly 13 percent higher than in the corresponding week last year.

Stocks of dairy products on January 1 were moderate and showed about the usual decline during December. As almost no butter is now held by governmental agencies, holdings of dairy products were well below total holdings on January 1 in most recent years, but were somewhat above the average of commercial stocks. Holdings of creamery butter in cold storage and evaporated milk in manufacturers' hands were rather light. Cold storage holdings of cheese continue exceptionally large for the season but are declining normally and are not burdensome.

Prices of dairy products were high through most of December but, after the sharp declines in butter and cheese prices in mid-January, are close to the average during January last year.

Milk production in 1940 was probably higher than in 1939 in all months except May, the higher production resulting partly from the small but steady increase in the number of milk cows and partly from somewhat higher production per cow. The sum of the estimates made each month indicates that milk production on farms in 1940 was about 111 billion pounds, or about 2 percent above production in 1939. The figures also indicate that production per capita in 1940 was slightly above previous records. These indications, however, are preliminary, pending the more precise estimates for the year that will be computed by States next month.

## DAIRY PRODUCTION: GRAPHIC SUMMARY FOR THE UNITED STATES



UNITED STATES DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE

Dairy Production

January 15, 1941

SUMMARY OF DAIRY STATISTICS FOR THE UNITED STATES

		:Average:		: 1940 or 1941			
		:1934-38: 1939		: Total		:Percent of	
		: or : or		: or Av.		:Prev. year	
		:1935-39: 1940					
MILK PRODUCTION ON FARMS							
Total, per month.....	mil.lb.	Oct.	: 7,942	: 8,077	: 8,510	a/	: 105.4
		Nov.	: 7,227	: 7,556	: 7,830	a/	: 103.6
		Dec.	: 7,383	: 7,816	: 8,051	a/	: 103.0
Per capita, daily average.....	lb.	Nov.	: 1.870	: 1.914	: 1.969	a/	: 102.9
		Dec.	: 1.847	: 1.915	: 1.958	a/	: 102.2
Per cow, per day.....	lb.	Nov.1	: 11.80	: 12.30	: 12.74		: 103.6
(As reported by crop correspondents)		Dec.1	: 11.29	: 12.09	: 12.17		: 100.7
		Jan.1	: 11.59	: 12.43	: 12.77		: 102.7
GRAIN FED PER COW	lb.	Dec.1	: 4.31	: 5.03	: 5.23	c/	: 104.0
(As reported by dairy correspondents)		Jan.1	: 5.11	: 5.51	: 5.50	c/	: 99.8
PRODUCTION OF MANUFACTURED DAIRY PRODUCTS							
Creamery butter, monthly.....	mil.lb.	Nov.	: 108.1	: 111.1	: 115.7	b/	: 104.1
		Dec.	: 110.8	: 117.0	: 124.2	ad/	: 106.2
weekly.....	week ending	Jan.2	: -	: -	: -		: 109.9
		Jan.9	: -	: -	: -		: 112.7
American cheese... .....	mil.lb.	Nov.	: 29.4	: 31.4	: 35.5	b/	: 113.1
		Dec.	: 26.7	: 30.6	: 33.6	ad/	: 109.8
Evaporated milk, case.....	mil.lb.	Oct.	: 135.0	: 144.6	: 172.0		: 118.9
		Nov.	: 102.3	: 123.7	: 133.6		: 108.0
4 products, milk equivalent.....	mil.lb.	Oct.	: 3,549	: 3,420	: 3,843		: 112.4
(Creamery butter x 21, all cheese except skim x 10, canned cond. & evap. milk x 2.2)		Nov.	: 2,912	: 3,047	: 3,224		: 105.8
		Dec.	: 2,943	: 3,199	: -		: 107.3 c/
STOCKS ON HAND							
Butter in cold storage.....	mil.lb.	Dec.1	: 93.7	: 89.8	: 67.6		: 75.3
(Including government holdings)		Jan.1	: 64.0	: 55.5	: 41.6	a/	: 75.0
Commercial holdings, only.....		Jan.1	: 44.9	: 40.6	: 41.5	a/	: 102.2
American cheese.....	mil.lb.	Dec.1	: 98.4	: 90.2	: 118.5		: 131.4
(Cold storage holdings)		Jan.1	: 92.7	: 86.8	: 112.0	a/	: 129.0
Evaporated milk, case.....	mil.lb.	Nov.1	: 257.1	: 175.6	: 358.2		: 204.0
(Manufacturers' stocks)		Dec.1	: 215.2	: 188.3	: 226.3		: 120.2
5 products, milk equivalent.....	mil.lb.	Nov.1	: 4,591	: 4,355	: 4,623		: 106.2
(Butter, all cheese, canned cond. & evap. milk plus cream in cold storage)		Dec.1	: 3,709	: 3,533	: 3,429		: 97.1
		Jan.1	: 2,909	: 2,748	: 2,646	cd/	: 96.3
PRICES							
Butterfat, per pound .....	ct.	Nov.15	: 30.3	: 28.1	: 30.9		: 110.0
(Prices received by farmers)		Dec.15	: 32.0	: 28.5	: 34.8		: 122.1
Butter, wholesale, per pound.....	ct.	Dec.	: 32.08	: 29.54	: 34.20		: 115.8
(92 score, Chicago)		Jan.	: 31.47	: 30.76	: 30.50	e/	: 99.2
American cheese, wholesale, per pound.....	ct.	Dec.15	: 15.20	: 15.00	: 17.00		: 113.3
(Twins, Plymouth, Wisconsin)		Jan.15	: 14.80	: 15.50	: 15.50		: 100.0
Milk, wholesale, per 100 pounds.....	dol.	Nov.15	: 1.96	: 2.02	: 2.02	b/	: 100.0
(All purposes, prices received by farmers)		Dec.15	: 1.98	: 2.00	: 2.07	a/	: 103.5
Milk for city distribution, per 100 pounds...	dol.	Dec.	: 2.19	: 2.25	: 2.24		: 99.6
(Prices paid by dealers, 3.5% basis)		Jan.	: 2.20	: 2.25	: 2.26		: 100.4
Milk, retail, delivered, per quart.....	ct.	Dec.	: 11.96	: 12.38	: 12.21		: 98.6
(Average, 25 markets)		Jan.	: 11.99	: 12.34	: 12.33	a/	: 99.9

a/ Preliminary. b/ Preliminary revision. c/ Forecast or interpolation.

d/ Not available when accompanying chart was prepared. e/ Price January 14.

Milk production per cow in the United States on January 1, as on the first of each of the previous four months, was at a new high level for the date, according to reports received from crop correspondents during the past 17 years. The relatively high level of production appears to reflect the continued influence of abundant supplies of hay and grain on farms, generally favorable prices, including the highest December prices for butterfat since 1937, and abnormally mild weather throughout the country in the last half of December. During the last week of December temperatures averaged from 10 to 15 degrees above normal for the season in most of the States east of the Rockies and north of the Cotton Belt.

Production per cow was rather generally above the 10-year average for January 1 except in the Gulf Coast States where rainfall has been excessive. Exceptionally high production per cow for January 1 was reported from Indiana, Illinois, Missouri, Iowa, Minnesota and North Dakota. For the country as a whole, the milk production per cow reported by crop correspondents on January 1 was 12.77 pounds, compared with previous January 1 production of 12.43 pounds in 1940, 12.33 pounds in 1939, and 11.83 pounds during the 10-year period, 1930-39.

The number of cows reported milked on about January 1 was 67.5 percent of the milk cows in the herds. This is the same as the average for the date during the past 3 years but is higher than in previous Januaries. In the North Atlantic and North Central groups of States, the percentage of cows reported to be in production was exceptionally high for the season and indicates that production is likely to continue high in these areas during the late winter and early spring months. On the other hand, the proportion of the milk cows reported milked has for some months been lower than usual in most of the range cattle area that extends from Montana to Texas and also in the area of low butterfat prices that extends northeastward from Texas into Kentucky. These are areas where the present high price of cattle might be expected to result in delayed weaning of the calves, in a decrease in cows milked, and in lower milk production.

MONTHLY MILK PRODUCTION ON FARMS, UNITED STATES  
1934-38 Average, 1939, and 1940

Month	MONTHLY TOTAL			DAILY AVERAGE PER CAPITA				
	Average	1934-38	1939	1940	Average	1934-38	1939	1940
	Million pounds			Pounds				
January	7,422	7,935	7,961	1.870	1.957	1.949		
February	7,044	7,534	7,791	1.950	2.056	2.038		
March	8,221	8,869	9,006	2.069	2.185	2.202		
April	8,809	9,347	9,447	2.290	2.379	2.386		
May	10,537	11,084	11,067	2.649	2.728	2.704		
June	10,996	11,464	11,805	2.855	2.914	2.979		
July	10,266	10,671	10,834	2.578	2.623	2.644		
August	9,194	9,672	9,812	2.307	2.376	2.393		
September	8,262	8,533	8,865	2.141	2.165	2.233		
October	7,942	8,077	8,510	1,990	1.981	2.073		
November	7,227	7,550	7,830	1.870	1.914	1.969		
December	7,383	7,816	8,051	1.847	1.915	1.958		
Yearly Total	103,303	108,558	110,979	2,202	2,267	2,294		

1/ As indicated by current monthly estimates for the United States. The estimates of production in 1940 as computed by States will be released February 17, 1941.

## KINDS OF GRAIN AND CONCENTRATES FED TO MILK COWS

Dairymen constantly adjust the rations of their cows to the kinds of grain available on their farms and to the relative prices of the various grains and by-product feeds available in their local markets. Feeding practices vary widely from month to month and from year to year; and they differ much between areas, between classes of producers, and even between neighboring farms. Some of these variations and differences are shown by the reports received from dairy correspondents in answer to a fall inquiry on the pounds of each kind of grain and concentrates being fed daily to their milk cows. Thus, during the 10 year period 1931-1940 corn has made up about 21 percent of the rations reported in the fall but the proportion has varied from 28 percent in 1933 when corn was relatively cheap to 14 percent about October 1, 1935 when the average price of corn was 90 percent higher than in 1933 and the price of oats was lower by 10 percent.

The ten-year averages of reports from the various parts of the country reflect the differences in relative quantities of the various grains produced and the wide differences in the degree to which farmers are dependent on purchased feeds. In the East North Central States corn has made up about 37 percent and oats 30 percent of the rations reported, while rations in the Western States contained less than one-tenth as much corn and less than half as much oats but four times as much barley. In the North Atlantic States commercial mixed feed was about 56 percent of the rations while in the West North Central States it was less than 4 percent of the total.

In using these tables it should be kept in mind that they reflect feeding practices in fall months as reported by farmers having herds of more than twice the average size. Because of seasonal differences in the availability of feeds and because large herds are fed relatively large percentages of purchased feeds, the proportions shown in the tables are not representative of all months nor typical of the rations fed by average farmers.

### RELATIVE QUANTITIES OF VARIOUS GRAINS AND CONCENTRATES FED TO MILK COWS IN HERDS KEPT BY DAIRY CORRESPONDENTS, UNITED STATES

Grain or concentrates	October 1										November 1	
	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940		
	%	%	%	%	%	%	%	%	%	%		
Corn	15.5	24.9	27.9	23.6	14.3	16.4	17.5	24.8	27.0	20.9		
Oats	21.6	22.0	17.3	12.1	18.6	18.1	22.8	21.9	21.0	23.9		
Barley	8.9	8.4	7.0	4.8	7.7	5.4	7.3	6.5	7.5	9.6		
Wheat	6.4	2.8	1.6	1.5	2.4	1.3	1.9	2.1	1.3	1.4		
Cottonseed meal or cake	3.0	2.8	3.5	4.0	3.4	3.6	3.7	2.8	2.2	2.5		
Cottonseed	1.0	.6	1.2	1.1	.6	.6	.5	.5	.7	.8		
Gluten feed or meal	2.0	3.4	2.7	3.6	2.6	1.9	1.9	2.4	1.8	1.7		
Linseed meal	1.4	.9	1.2	1.1	1.2	.7	1.0	.4	.6	1.1		
Soybeans or soybean meal							.8	2.5	2.6	2.4		
Wheat bran, shorts, middlings	11.5	9.3	9.2	11.6	8.1	8.3	6.9	6.9	4.9	4.9		
Commercial mixed feed	23.3	19.4	21.1	29.4	32.9	35.4	31.6	24.8	24.7	25.9		
Hominy	1.0	1.6	1.2	1.2	1.1	1.0						
Other grains & concentrates	4.4	3.9	6.1	6.0	7.1	7.3	4.1	4.4	5.7	4.9		
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0		

### 10-YEAR AVERAGE, 1931-40, BY MAJOR GROUPS OF STATES

	North	E.N.	W.N.	South	South	United	
	Atlantic	Central	Central	Atlantic	Central	West	States
	%	%	%	%	%	%	%
Corn	9.2	36.8	32.2	22.5	20.7	3.6	21.3
Oats	10.5	30.0	35.6	6.7	12.5	13.3	19.9
Barley	3.5	6.4	9.9	7.5	2.9	25.3	7.3
Wheat	1.5	3.1	2.2	3.7	2.0	3.5	2.3
Cottonseed meal or cake	1.3	1.2	1.8	8.6	17.4	2.7	3.1
Cottonseed			.1	2.1	7.4	.5	.8
Gluten feed or meal	5.1	1.9	.3	.8	.6	.2	2.4
Linseed meal	1.1	.9	.9	.5	.2	1.5	1.0
Wheat bran, shorts, middlings	5.2	6.5	9.4	7.1	14.7	17.3	8.2
Commercial mixed feed	55.6	6.4	3.8	32.8	12.4	19.7	26.8
Other grains & concentrates	7.0	6.8	3.8	7.7	9.2	12.4	6.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

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## MILK PRODUCED PER MILK COW IN HERDS KEPT BY REPORTERS 1/

State and Division	January 1,	January 1,	January 1,	January 1,
	(Avg. 1930-39)	1939	1940	1941
Maine	12.6	12.1	12.8	13.1
New Hampshire	14.7	13.2	15.0	14.4
Vermont	12.8	12.1	12.6	13.1
Massachusetts	17.1	16.6	17.4	17.6
Connecticut	16.3	16.1	17.2	17.5
New York	15.0	15.8	16.2	16.0
New Jersey	18.2	18.5	18.8	18.6
Pennsylvania	15.2	15.3	15.7	16.2
North Atlantic	15.16	15.49	15.76	15.96
Ohio	13.4	13.5	13.8	14.1
Indiana	12.1	12.4	12.8	13.6
Illinois	12.8	13.4	14.0	15.1
Michigan	15.2	15.7	16.4	16.2
Wisconsin	14.0	13.8	14.5	14.9
East North Central	13.61	13.72	14.38	14.91
Minnesota	14.6	15.7	15.7	16.5
Iowa	12.5	13.3	13.4	14.0
Missouri	8.1	8.4	8.0	8.9
North Dakota	9.6	10.1	10.5	12.2
South Dakota	9.6	10.6	10.0	11.2
Nebraska	11.7	12.8	12.5	12.2
Kansas	12.3	13.7	12.2	12.6
West North Central	11.52	12.42	12.23	12.85
Maryland	13.3	14.2	14.2	14.6
Virginia	9.4	10.0	9.6	10.7
West Virginia	9.1	9.2	9.1	9.2
North Carolina	10.0	10.7	10.8	10.7
South Carolina	9.3	9.8	9.9	11.2
Georgia	8.0	8.8	8.7	8.9
South Atlantic	9.74	10.31	10.18	10.65
Kentucky	9.1	9.8	9.6	9.8
Tennessee	8.3	8.6	8.8	8.5
Mississippi	6.2	6.7	5.6	5.4
Arkansas	6.9	6.6	6.9	7.3
Oklahoma	9.2	9.9	8.7	8.6
Texas	7.9	8.2	7.7	7.5
South Central	7.98	8.25	7.86	8.04
Montana	11.1	12.5	12.3	12.1
Idaho	15.0	15.9	16.4	15.0
Wyoming	10.3	10.7	11.1	10.9
Colorado	11.7	12.4	13.9	12.9
Washington	14.9	15.5	15.7	15.3
Oregon	13.5	14.2	13.8	14.0
California	15.8	16.3	18.0	16.6
Western	13.39	14.18	14.87	14.25
UNITED STATES	11.83	12.33	12.43	12.77

1/ Averages represent the reported daily milk production of herds kept by reporters divided by the total number of milk cows (in milk or dry) in these herds. Figures for New England States are based on combined returns from crop and special dairy reporters and are weighted by counties. Figures for other States, regions, and U. S. are based on returns from crop reporters only. The regional averages are based in part on records of less important dairy States not shown separately, as follows: North Atlantic, Rhode Island; South Atlantic, Delaware and Florida; South Central, Alabama and Louisiana; Western, New Mexico, Arizona, Utah and Nevada.

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## MILK AND CREAM FOR FLUID CONSUMPTION

Milk used for fluid consumption as milk or cream probably totaled about 46 billion pounds in 1939, or about 42 percent of all the milk produced in the United States. This includes about 12.9 billion pounds used on the farms where produced, 6.8 billion pounds retailed by farmers, about 23.9 billion pounds sold by farmers at wholesale and ultimately used for fluid consumption, and a flat allowance of 2.4 billion pounds to cover milk for fluid consumption produced by village cows. Considering both wholesale and retail sales, the milk sold by farmers for fluid consumption probably brought about \$800,000,000 or about three-fifths of the value of all dairy products sold from farms. These estimates are preliminary because the depression and the droughts changed or reversed many of the earlier population trends and there has been no adequate basis for estimating the number of consumers in the various areas. After the calculations can be adjusted to the 1940 records of population it may be possible to issue more precise estimates.

The most accurate statistics on the quantities of milk and cream sold for fluid consumption now appear to be those prepared by some cities and States where milk control laws are in effect. The control agencies have adopted somewhat diverse classifications and methods of calculation, and at first there were various changes in the areas covered and in procedure, but the statistics collected are becoming increasingly valuable. While they need to be supplemented by comparable records for areas not under control to permit measurement of national trends, they help materially in measuring some of the factors affecting fluid consumption.

It is already evident that population changes are one of the major causes of both the seasonal and the year to year variations in sales. As will be noted from the graph on the front cover, this shows clearly in the records for cities where there are known to be seasonal changes in population. Totals for groups of cities show relatively smaller changes. During the three years 1936-1938, monthly averages of the volume of fluid milk plus milk equivalent of the fluid cream sold per day in 25 of the principal middle-sized cities of Wisconsin ranged only from 102 percent of the 1936 average in April 1936 down to 94 percent in August 1938. This range seems small when one considers the great changes in employment, the seasonal movement of people between cities, farms and resort areas, the potential effects of the high summer sales of ice cream, seasonal changes in food habits, and the seasonal variation of perhaps 3 or 4 percent in the quantity of solids contained in each quart of milk.

Various records of sales, utilization and receipts show diverse, but often compensating, trends. Probably because of population shifts, milk sales in the States of New Jersey and Connecticut are highest in July and August when sales in Indiana and Virginia cities are lowest. Milk skimmed for fluid cream tends to be high when the test of the milk produced is low. It then takes more milk to produce a pint of cream and usually the volume of cream sold increases in the spring as the percentage of cream in the milk declines. Local prices have also affected consumption, particularly when drought or other factors have caused the price of milk or cream to advance out of line with other foods. Some reports on market receipts of cream differ markedly from records of fluid cream sales because the receipts include the large and variable quantities of cream brought in for making ice cream. Records for most areas show changes that appear to be related to the level of employment but employment so greatly affects the trend of population in an area that local changes in per capita consumption of milk may differ materially from changes in sales.